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Number 1

College of Agriculture

Announcement of

The Ten Weeks' Course in Agriculture, 1916

and

Farmers' Week, January 4-7



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LEXINGTON

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THE UNIVERSITY PRESS

FARMERS' WEEK

AT THE COLLEGE OF AGRICULTURE

JANUARY 4-7, 1916.

One who is endeavoring to make farming pay, cannot afford to be absent from this gathering of the best and most successful farmers of the State.

In addition to Kentucky men, there will appear on the various programs, men of national reputation in the various departments of agriculture represented.

Competitive exhibits will be conducted by the Kentucky Poultry Association, State Bee Keepers' Association, Kentucky Corn Growers' Association, State Horticultural Society, Kentucky Dairy Cattle Club and Kentucky Home Economics Club.

Handsome premium lists have been provided for the show of each association.

Exhibits may be sent without being accompanied by owners. For rules in each particular show, see premium list.

Reduced rates have been secured over all roads.

The farm, stock and all equipment of the College of Agriculture and Experiment Station will be at the service of visitors. All is absolutely free.

For premium lists or information, address

T. R. BRYANT,

Experiment Station,

Lexington, Kentucky.

The Ten Weeks' Course in Agriculture.

The ten weeks' course in agriculture is designed to meet the needs of young men, farmers and farmers' sons, who cannot afford the time or money required by the longer courses in agriculture, and who wish to secure a more thorough preparation for their life work on the farm. This short course in agriculture serves to emphasize the practical and business aspects of farming as a livelihood.

Through numerous farm papers and periodicals many farm boys have already realized something of the possibilities of the old home farm and are desirous of learning how to develop these possibilities to the fullest extent, so as to make farming interesting and profitable.

In order to meet the needs of as large a number as possible, the work of the ten weeks' course is arranged along three distinct lines, the first including a course in general agriculture, the second a course in dairying and the third, a course in horticulture. These three courses obviously have many subjects in common, but students in dairying, for example, will be given more thorough practical instruction in the dairy and dairy laboratory and students in horticulture more thorough work in this subject. All students in the ten weeks' course will receive instruction in soils and field crops in the same classes with those pursuing the work in general agriculture and will also take courses in the breeding of live stock and in the study of the diseases of domestic animals, in addition to the more specialized subjects claiming their attention.

Admission.

The ten weeks' course in agriculture is intended primarily to aid the student on the business side of farming and not especially in the direction of academic scholarship. Hence, there are no examinations for entrance to the ten weeks' course. The applicant, however, must be at least seventeen years of age and should have had a good common school education. In fact, the more thorough and extensive his general education has been, the greater the benefit that he will derive from the ten weeks' course. It is particularly important that he should have had good training in English and

arithmetic, as many of the students in the ten weeks' course are often seriously handicapped by deficiencies in these subjects.

Arrangements for Entrance.

Make your arrangements to arrive in Lexington some time on Monday, January 3rd, preferably in the morning, and come directly to the State University. The University and the Experiment Station are located on South Limestone Street, about three-quarters of a mile from the central part of the city, on the South Lime street car line. If you have not already made arrangements for room and board, come directly to the office of the Dean of the College of Agriculture, on the first floor of the Experiment Station building. The Dean's office will be open from 8 a. m. to 6 p. m., for the reception and registration of students. In this office will be found a list of rooms and boarding places for students, and an assistant will help you find satisfactory quarters. Regular class work in the ten weeks' course in agriculture will begin Tuesday, January 4th.

Expenses.

Tuition in the ten weeks' course in agriculture is free to residents of the State. Non-residents pay a nominal fee of \$5.00.

Comfortable rooms can be obtained at from \$1.50 to \$2.00 per week, where two occupy a room together, or at \$2.00 to \$2.50 per week, when occupied by one person. Good table board can be secured near the college at from \$2.50 to \$4.00 per week.

Students in the special course in dairying will be required to provide themselves with a white cotton suit, costing about \$2.00.

An allowance of from \$6.00 to \$10.00 should be made for books and various incidental expenses. With economy, the expenses of a student for the entire ten weeks need not exceed \$60.00. This, however, does not include railroad fare to and from Lexington.

Instruction.

Instruction in the ten weeks' course in agriculture is given by lectures and practical exercises in the various branches of agriculture that can be conducted during the winter and by frequent class visits to stock farms and other points of special agricultural interest. The lectures are given mostly by the regular instructors in the College of Agriculture, the effort being made to make these lectures as plain and practicable as possible. The lectures are illustrated by the materials of which they treat, and in some instances, by lantern slides, the lecture rooms of the College of Agriculture being provided with first class lantern equipment.

The greenhouses, barns and various laboratories of the Kentucky Agricultural Experiment Station will be used as fully as possible for practical illustrative purposes.

Special Lectures.

In addition to the work offered by the regular instructors in the College of Agriculture, arrangements will be made for securing the services of men of reputation and prominence in the various branches of agricultural work, and it will include men of prominence in general agriculture, horticulture and the various lines of animal husbandry. In this way, it is hoped to add very greatly to the interest and practical benefits of the ten weeks' course in agriculture.

As in former years, the first week of the ten weeks' course will be given over largely to the various exercises of Farmers' Week. The work of Farmers' Week, which is participated in by men of state and national reputation in their respective fields, constitutes one of the most valuable features of the ten weeks' course in agriculture and every student in this course should avail himself to the utmost of these privileges. The more detailed work of instruction in the ten weeks' course will begin Monday, January 10th.

Outline of Subjects of Ten Weeks' Course

I. Agronomy.

Professors Roberts, Kinney, Karraker, Myer and Farra.

As its name indicates, Agronomy is that branch of agricultural science which treats of the cultivation of the soil, and includes a study of soils, field crops and farm equipment.

Soils.

The study of soils as presented here includes the origin and nature of soils, sources of plant food, principles of tillage, soil moisture, manures and green manure crops and the restoration and maintenance of soil fertility. The subject of commercial fertilizers is also given consideration and the results of experiments on soil fertility on various soil types in the State will also be considered.

Field Crops.

The study of field crops includes methods of seeding, cultivation and handling of the principal grain and forage crops, methods of improving farm crops by the selection of suitable varieties and by the selection and proper care of seed. Crop rotations will also be given special attention and some time will be spent in judging corn and other grains.

Farm Equipment.

Since the introduction of modern machinery, the farmer of today needs training along mechanical lines and a good working knowledge of the principles of mechanics. Instruction in farm equipment includes the study of the mechanism and construction of farm implements, with a detailed examination and comparison as to their efficiency and adaptability in order that mechanical judgment may be acquired which will enable students to intelligently select and use the type best suited to their requirements. Also the subject of motor power and power plants for general use, such as pumping, lighting and for special purposes, will be carefully considered. The planning, location and arrangement of farm buildings, fences and other structures, including proper selection of material and practice in the use of concrete on the farm, form an important part of the study of farm equipment.

II. Animal Husbandry.

Horses, Dairy Cattle, Poultry.

*Professors Hooper, Anderson,
Nicholls and Wilkins.*

Beef Cattle, Sheep, Swine.

*Professors Good, W. V. Smith
and M. J. Smith.*

Stock Judging.

In starting upon this course the students are made familiar with the various market types of horses, cattle, sheep and swine. The different points of excellence of a perfect animal are considered, followed by a consideration of the adaptation of the different breeds to our conditions, with a discussion of their relative points of merit. In carrying out this study, a carefully prepared score card is used to develop the student's powers of observation and to fix in his mind the best types. Frequent visits are made to the numerous stock farms near Lexington, where the animals are scored, and the methods of management are closely studied.

Feeding.

This course embraces a study of the theory and principles of animal nutrition; the composition of the animal body and of feeding stuffs; the relative economy of feeds at market prices, and the compounding of rations for horses, beef and dairy cattle, sheep and swine. The feeding operations at the Experiment Station and at farms in the vicinity of Lexington are used as illustrative material. The course also includes a brief study of the anatomy and physiology of the digestive systems of the various domestic animals.

Breeding of Live Stock.

The basic principles of breeding animals and the methods to be employed in improving the breeding stock of the State, special problems such as the influence of environment, of fecundity, of previous impregnations, variations, etc., are considered in their relation to the operations of the stock breeder.

III. Bacteriology.

Dr. Pinnell.

Bacteriology is that branch of natural science which has for its object the study of various micro-organisms, especially in their relation to agriculture, certain manufacturing processes and disease. As presented here, the study of bacteriology will include those micro-organisms

which occur in milk and which are concerned in the souring of milk and in the making of butter and cheese. It will also include the bacteriological examination of water supplies and such general subjects as sewage disposal and general sanitation, and the cause of disease among live stock.

VI. Diseases of Live Stock.

Dr. Graham.

This course includes the study of the common ailments of farm animals, their cause, treatment and prevention.

Special attention is given to contagious abortion, forage poisoning, white diarrhea of chicks, blackhead in turkeys, fowl cholera, anthrax, hog cholera, tuberculosis, nasal grub, and stomach worms of sheep. A brief study is also made of hygiene, and general prophylactic measures to be employed in the control of infectious animal diseases.

V. Farm Dairying,

Professors Hooper and Nicholls.

The course in dairying is designed to acquaint the student with the practical methods employed in the operation of a dairy farm or creamery.

This course of study will include lectures and practical laboratory instruction in the judging and selection of dairy cattle, the compounding of rations for dairy cows, the adaptation of dairy barns to the production of sanitary milk and the separation of cream by use of the various gravity and centrifugal systems.

The student will be made familiar through frequent practice with the use of the Babcock milk tester and with proper methods of ripening cream for churning. The class will be divided into sections in order that each may participate in the churning of cream and in a study of the production of first class butter.

Visits will be made to the various dairy farms located near Lexington, and careful inspection will be made of the creameries in this part of the State.

Students pursuing the special dairy course will be expected to provide themselves with a suit of white duck as commonly used in the best dairies and creameries.

VI. Botany.

Professors Gilbert and McFarland.

Botany, as given in this course, will include a study of the plant life of the farm.

In the study of plant life the excellent equipment of the botanical laboratories will be placed at the service of the students of the ten weeks' course. By the aid of simple and compound microscopes the pupils will study the structure of seeds, roots, stems, leaves, flowers and fruits. The functions of each of these organs of the plant will be discussed, and in some cases experiments will be undertaken to demonstrate the physiological principles of plant life. Those topics which are of special importance to farmers will receive the fullest consideration, such as germination of seeds, how plants feed, the work of roots and leaves, the office of the inner and outer bark, movements of the sap, the importance of the blossom, cross fertilization, etc. Some attention will also be given to those low forms of plant life, the fungi, which are the cause of many of the diseases affecting farm and garden crops.

VII. Horticulture.

Professors Mathews, Carmody, Elliott and Adams.

In the horticultural instruction the time is divided between lectures and practice in the various horticultural operations. In the lectures a brief review is given of the principles of plant structure and growth upon which are based the various horticultural practices. Further attention is given to the subdivisions of the subjects as follows:

(a) Pomology or Fruit Growing.

Soils. Location and Planting of fruits are considered with reference to character of soil; the relative value of various slopes and elevations, water and atmospheric drainage; protection from frosts and freezes, and market and transportation facilities.

Propagation of trees, vines and berry plants by seeds, cuttings, layering, budding, grafting, etc.

Tillage of fruit land in preparation for planting; cultivation of orchards, grapes and berry plantations; cropping orchards; cover crops, mulching and other methods of soil management relating to the conservation of soil moisture, the ripening of wood, inducing growth or promoting fruitfulness.

Pruning and General Management of fruit trees, vines, etc., at the time of planting and throughout their later development; the top-grafting of mature trees. Several lessons are given upon the various methods of pruning and training grapes.

Spraying of trees and other fruits for the purpose of combating insect and fungus pests is given special attention. Students are given individual practice in handling the spray pump, and in compounding and applying such preparations as the Bordeaux mixture, kerosene or coal-oil emulsion, etc.

Harvesting, Storing and Marketing of the various fruits grown in Kentucky.

Varieties adapted to the soils and climatic conditions of our State are considered further with reference to their various uses at home or for near or distant markets.

(b) **Vegetable Growing and Market Gardening.**

This subject will include a discussion of the growing of the various vegetable crops, both in the open field and as modified by the use of cold frames, hot beds and forcing houses. Particular attention will be given to the methods and arrangements most suitable for the farmer's home garden.

(c) **Planting Home Grounds.**

A few lectures are given upon laying out home grounds with reference to drives and walks; planning, planting and subsequent management of windbreaks, shade trees, shrubs and other ornamental plants, useful in adding comfort and beauty to the farm home, as well as increasing its value.

VIII. Economic Entomology.

Professors Garman, Vansell and Stiles.

Economic entomology treats of those insects of economic importance in their relation to agriculture. Instruction in this subject is given by laboratory exercises and lectures and in all cases will be made as thoroughly practical as possible.

Beginning with an examination of types of the important groups of insects and employing only such as are of economic importance, the work will be so conducted as to give the student a knowledge of the essentials of insect structure, after which it will be widened to include study of the habits, life-histories and injuries of common insect pests, and then be completed by instruction on preventing and checking insect injuries.

Several lectures on bee-keeping will be included, illustrative material being drawn from the collections and other equipment belonging to the Entomological Department of the Experiment Station and University.

Different types of spraying apparatus will be used in illustration of the subject of spraying, and a lecture or two will be devoted to this special feature of farm and orchard practice.

An abundance of preserved insects will be provided for laboratory work, but it will add to the interest of the instruction if students attend-

ing can bring with them for identification and study, specimens of any insect pests giving trouble in their respective neighborhoods. No text-books or apparatus are required, but a good hand magnifier will prove useful, and those owning one should bring it with them. A note-book or other convenience for keeping notes should be in the hands of every student taking the course. Those not already provided with such material can procure it to advantage after reaching Lexington.

IX. Road Construction and Maintenance.

Professors Rowe and Terrell.

Lectures upon highways and highway construction, road material, macadam roads, sand clay roads, gravel roads, bituminous pavements, concrete and brick roads will be conducted in the Civil Engineering building January 4th to 16th, by expert road builders from all parts of the country. A full line of road building machinery will be on exhibition. A testing laboratory for testing road building material will be in operation each afternoon.

X. Farm Law.

Judge Lafferty.

The course of lectures will be devoted to the careful consideration of those laws which are of special interest in the common experience of farmers, including contracts, the legal requirements of buying and selling real estate and personalty; leases, bills, notes and checks; roads and pass-ways; taxation; principles of sales; relation of the farmer to the common carriers; making wills; relation of landlord and tenant, and the legal aspect of trespass.

XI. Weather Forecasting as Related to Farm Practice

Mr. Wurtz.

The U. S. Weather Bureau has a fully equipped meteorological observatory at Lexington. A course of lectures will be given by the local forecaster, relating to such subjects as the fundamental causes of weather conditions, the use of the weather map and the interpretation of weather forecasts; personal observations on the part of the individual farmer; the prediction of rainfall and other weather conditions; choice of location for tender crops, and the protection from frost.

Farmers' Week.

In connection with the ten weeks' course in agriculture, it is desired to call attention especially to the exercises of Farmers' Week, to be held at the College of Agriculture and the Experiment Station, State University, Lexington, Kentucky, January 4-7, 1916. As its name implies, Farmers' Week consists of a series of exercises and exhibits of interest to farmers in the various branches of agriculture and includes the annual conventions of the Dairy Cattle, Beef Cattle, Sheep, Swine and Horse Breeders' Associations, the State Horticultural Society, the Kentucky Corn Growers' Association, the Kentucky State Bee Keepers' Association, the Kentucky State Poultry Association, the Kentucky Branch of the American Poultry Association, and the semi-annual meeting of the Kentucky Home Economics Association. In connection with the meeting of the State Horticultural Society, it is proposed to hold an apple show and a general horticultural exhibit which should be of interest to all fruit growers in the State. These several meetings will be addressed by men of national and international reputation in their respective fields and by the best local talent obtainable.

Exhibits.

During Farmers' Week, attractive exhibits will be made of dairy products, including milk, cream and butter, home grown fruits and vegetables, burley tobacco, honey, woman's work, including cooking, canning, preserving, sewing and household decoration, etc. The Corn Show, the Horticultural Exhibit and the State Poultry Show will be among the most complete and attractive of any of their kind to be seen in this country.

Premiums and Awards.

Arrangements have been made whereby the Experiment Station will be able to offer handsome bronze medals for the best exhibits in the following general classes; corn, the best acre yield properly certified to; dairy products, the best sample of milk, cream and butter produced in the State; horticulture, the best exhibit of apples raised in Kentucky; bee keepers' products, the best six sections of honey produced in the State; the best exhibit of burley tobacco grown in Kentucky; woman's work, the best exhibit of canned fruits and vegetables put up by a private individual of the

State; poultry, the best exhibit of poultry, any or all classes, raised in the State. In addition to the above, special premiums and awards will be given for the best exhibits in the Corn Show, the Dairy Show, the Poultry Show, the Fruit Show and in the various departments of Home Economics. Complete lists of these premiums are furnished in the special announcements setting forth the work of these several departments.

Of all the various agencies now at work for the advancement of scientific agriculture in the State, the work and activities of Farmers' Week stand second to none. After attendance at these meetings, the open-minded, progressive farmer returns to his home greatly benefited by what he has seen and heard, greatly refreshed and with renewed enthusiasm for his work. Old processes and operations have been made intelligible to him and he has received the stimulus of new discovery and observation in his chosen field of work. Can you not so arrange your affairs as to lend us the encouragement of your presence at some of the exercises of Farmers' Week? You are bound to see or hear something of interest and something of importance in relation to your work.

No fees are required for attendance at any of the meetings or exhibits held during Farmers' Week. Reduced rates are offered by all of the railroads of the State. On the last page of this bulletin, there will be found a tabulated schedule of the week's work. For further particulars, address

JOSEPH H. KASTLE,
*Director, Kentucky Agricultural Experiment Station,
Lexington, Kentucky.*

Kentucky Alfalfa Growers' Association

Tuesday, January 4, 10:00 a. m., Lecture Room, Firstst Floor,
Agricultural College Building.

This is the second annual meeting of this association.

General discussions on alfalfa production, feeding, marketing, etc., will be held. Anyone interested in alfalfa is invited to attend.

Kentucky Beef Cattle Breeders' Association

Tuesday, January 4, 10:00 a. m., Experiment Station
Building, Assembly Room.

This meeting is called for the purpose of discussing

methods of breeding, feeding and marketing of beef cattle, also to discuss State and Federal sanitary laws relating to the handling of domestic animals.

Kentucky Poultry Association

Wednesday, January 5, 10:00 a. m., Second Floor, Agricultural College Building.

The Third Annual Poultry Show will be held, beginning Monday at 10:00 a. m. The judge will begin his work at that hour.

Liberal money premiums and cups will be offered.

This is the "Show beautiful." Annual poultry meeting, with speakers from a distance, Wednesday.

Kentucky Swine Breeders' Association

Wednesday, January 5, 10:00 a. m., First Floor, Agricultural College Building.

This association holds annual meetings for the purpose of discussing the breeding, feeding and care of the hog, as well as proper methods of butchering and blocking the carcass, and curing the meat of this animal.

The diseases of the hog, together with proper sanitary measures of controlling and eradicating the same, are always given consideration.

State Bee Keepers' Association

Wednesday, January 5, 10:00 a. m., Experiment Station Building.

This is the third annual meeting of this Association.

Everybody interested in beekeeping is invited to attend and take part in the discussions. An exhibit of apiary products and of beekeepers' supplies will be made in the seed laboratory across the hall from the Assembly Room. A program will be announced later. Further information can be obtained of the President, Mr. H. C. Clemons, of Boyd, Kentucky, or of the Secretary, Prof. H. Garman, Lexington, Kentucky.

Kentucky Horse Breeders' Association

Thursday, January 6, 9:30 a. m.

A business meeting and program Thursday morning. Principal emphasis laid on discussion and postmortems relating to barrenness in mares and jennets.

In the afternoon a joint session with other associations will be held in the College Chapel, Main Building, to discuss marketing problems.

Anyone interested is invited to attend all sessions.

Kentucky Corn Growers' Association

Thursday, January 6, 9:30 a. m., Lecture Room, First Floor, Agricultural College Building.

Business session and general discussion of various topics of interest to corn growers.

In the afternoon a joint session with other associations will be held in the College Chapel, Main Building, to discuss marketing problems.

Anyone interested is invited to attend all sessions.

State Horticultural Society

Thursday, January 6, 9:30 a. m., Assembly Room, Experiment Station Building.

The annual meetings of this Society are devoted largely to discussions upon orcharding, small fruits, and vegetables, in their various phases, and ornamental gardening.

Such secondary topics as varieties, cultural methods, fertilizers, crop pests, methods of packing and marketing, etc., are usually given a place on the annual program, in varying proportions from year to year.

In the afternoon a joint session with other associations will be held in the College Chapel, Main Building, to discuss marketing problems.

Anyone interested is invited to attend all sessions.

Meeting for the Discussion of Marketing Problems

Thursday, January 6, 1:30 p. m., College Chapel, Main Building.

Agricultural study has for years dealt largely with problems of production. Problems of marketing have received only casual attention. We feel that it is time to vigorously attempt to help the farmer in the marketing of his products. Men of wide reputation and experience, from Kentucky and other States will take part in this program and we hope for immediate, practical results.

Suggestions from anyone interested in this problem will be welcomed.

Kentucky Sheep Breeders' Association

Friday, January 7, 10:00 a. m., Lecture Room, First Floor, Agricultural College Building.

This Association holds annual meetings to discuss the breeding of pure bred sheep in this State, as well as to discuss the grading of the common ewe of the country with pure bred bucks for the purpose of increasing the wool and mutton production of these animals.

The value of mutton as a food is sometimes dwelt upon by practical demonstrations in the proper slaughtering of the animal, as well as the proper cooking of the meat of the same.

Papers are read on the value of mutton as a food.

The marketing, feeding and the controlling of parasites affecting sheep are always given prominent places on the program.

Kentucky Dairy Cattle Club

Friday, January 7, 10:00 a. m., Last Room, Second Floor, Agricultural College Building.

The ninth annual meeting and dairy show will be held January 7. Several hundred dollars in premiums will be

offered for the best samples of milk, cream and butter sent in by farmers and creameries.

Speakers of prominence will be secured to address the meeting.

Home Economics Association

Education Building, University Campus.

The Home Economics Department will conduct a series of Home Makers Conferences on the afternoon of January 4th, and at 10 a. m. and 2 p. m., on January 5th and 6th, at the Education Building, Third Floor.

The meetings will be devoted to discussions of the greatest problems of the home and experts from the government and specialists from other universities will be invited to speak.

Since eight out of ten children attending school in the State are matriculated in the rural schools, January 7th, will be given to helpful, practical talks and discussions associated with the life of the rural school. Trustees, teachers and county superintendents are urged to be present. January 8th, will be "DEMONSTRATION DAY," on which a lunch for about one hundred people will be prepared by the students of the department. Home made labor-saving devices such as fireless cookers, etc., will be made. Machine sewing and drafting of patterns will be demonstrated. Butter making and ornamental icing of cakes will also be shown. Every day will be crowded with addresses and discussions valuable to the home maker.

Mary E. Sweeny, Head of Department.



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FARMERS' WEEK

1916

TUESDAY, JANUARY 4.

Kentucky Beef Cattle Breeders' Association.
Kentucky Alfalfa Growers' Association.

WEDNESDAY, JANUARY 5.

Kentucky Poultry Association.
Kentucky Swine Breeders' Association.
State Beekeepers' Association.

THURSDAY, JANUARY 6.

Kentucky Horse Breeders' Association.
Kentucky Corn Growers' Association.
State Horticultural Society.

**Meeting for the Discussion of Marketing
Problems (Afternoon).**

FRIDAY, JANUARY 7.

Kentucky Sheep Breeders' Association.
Kentucky Dairy Cattle Club
Meeting of Tobacco Growers.

Work in Home Economics Throughout the Week.